Abstract

Data items are represented by trees and stored in a database, the collection of data items defining a forest. Queries and masks are also represented by trees. A method for navigating the forest of data items is disclosed in the context of a graphical user interface. A set of operations

5   on trees are defined such that the data items can be queried on the basis of structure as well as node values. That is, the query can include a specification of the relationship between nodes in a tree, as well as the data in the nodes themselves. Exemplary implementations of such operations are disclosed in the context of a database update procedure. Additionally disclosed are methods for efficiently storing and processing the forest of data items.

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